PRELIMINARY NOTE ON HETEROCHROMOSOMES IN THE GUINEA PIG.

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It is the purpose of this preliminary note on the spermatogenesis of the common guinea-pig merely to state some of the most obvious facts concerning the unequally paired heterochromosomes as they appear in the first spermatocytes. In the later growth stages a characteristic heterochromosome (Fig. 1, *x*)

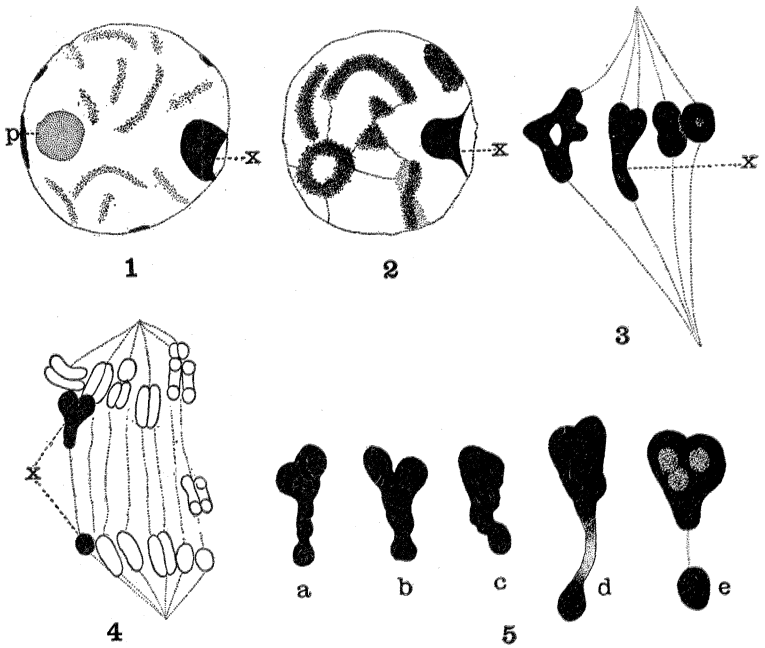

FIG. 1. First spermatocyte growth stage. *X* = the heterochromosome. Mag. 2,000.

FIG. 2. Prophase.

FIG. 3. First spermatocyte metaphase, tangential section of spindle showing the heterochromosome *X*.

FIG. 4. Anaphase.

FIG. 5. The heterochromosome; *a*, *b*, *c*, from sections of Flemming material; *c*, *d*, from acetocarmine preparations. Mag. 2,000 for all of the figures.

is easily distinguished both in acetocarmine preparations and in sections of Flemming material stained with thionin. The plasmosome (*p*) is even paler than the spireme. In Fig. 2, a prophase, the heterochromosome (*x*) is also shown. Fig. 3, a tangential section of a first spermatocyte spindle, shows the usual form of the heterochromosome in metaphase, and in Fig. 4 we have it divided into its unequal components. Fig. 5, *a*, *b*, *c*, shows slight variations in the metaphase form of the heterochromosome as seen in sections, and *d*, *e* the metakinesis of this chromosome, the large size of these two figures being due to the fact that the figures were drawn from acetocarmine preparations. Further details will be given later.

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